

What is claimed:

1. A system adapted to install a child safety seat in a vehicle, comprising:
a child safety seat,
a restraint system; and
5 a tension device;
wherein the restraint system includes at least one restraint belt,
wherein the restraint belt includes a restraint belt loose end,
wherein the tension device is connected to the restraint belt loose end, and,
wherein the tension device is adapted to generate tension on the restraint system through
10 the restraint belt loose end to firmly secure the child safety seat with respect to the
vehicle.
2. A system of claim 1, further comprising:
an anchor point;
wherein the restraint system is adapted to secure the child safety seat with respect to the
15 vehicle,
wherein the restraint system includes at least one restraint belt and at least one belt
buckle,
wherein the restraint belt includes a restraint belt loose end and a restraint belt secured
end, the restraint belt secured end is connected to the vehicle,
20 wherein the tension device is connected to the restraint belt loose end,
wherein the anchor point is connected to the tension device, and,
wherein the tension device is adapted to generate tension on the restraint system through
the restraint belt loose end to firmly secure the child safety seat with respect to the
vehicle.
- 25 3. The system adapted to install a child safety seat in a vehicle of Claim 2, wherein the
restraint belt loose end is connected to the tension device with a clamp-type device.
4. The system of Claim 2, wherein the tension device is selected from the group consisting
of a pulley-type device, a gear-type device, and a lever-type device.
5. The system of Claim 2, further comprising:
30 a tension-measuring device;
wherein the tension-measuring device is connected to the tension device, and,

wherein the tension-measuring device is adapted to measure the tension on the restraint belt loose end.

6. The system of Claim 5, wherein the tension device is selected from the group consisting of a pulley-type device, a gear-type device, and a lever-type device.

5 7. The system of Claim 6:

wherein the tension device is adapted apply a mechanical advantage greater than 3.0.

8. A method adapted to install a child safety seat in a vehicle, comprising:

connecting a tension device to a restraint belt loose end;

generating tension on the restraint belt loose end by the tension device, wherein the

10 restraint belt secures the child safety seat relative to the vehicle.

9. The method of Claim 8, further comprising:

mounting a child safety seat in a vehicle, wherein the vehicle includes a restraint belt and belt buckle;

passing the restraint belt through the child safety seat to secure the child safety seat to the

15 vehicle;

buckling the belt buckle;

connecting a tension device to a restraint belt loose end;

connecting the tension device to an anchor point;

generating tension on the restraint belt loose end by the tension device, wherein the

20 restraint belt secures the child safety seat relative to the vehicle.

10. The method of Claim 9:

wherein a tension-measuring device is connected to the tension device; and,

wherein the tension-measuring device is adapted to measure the tension on the restraint belt loose end.

25 11. The method of Claim 9, wherein the restraint belt loose end is connected to the tension device with a clamp.

12. The method of Claim 9 wherein the tension generated on the loose end of the belt is at least 75 kg/165 lbs. tensional force.

13. The method of Claim 9, wherein the tension generated on the loose end of the belt is at least 150 kg/330 lbs. tensional force.

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14. A child safety seat installation device comprising:

- a first attachment device adapted to grip a restraint belt loose end;
a flexible member;
a tension device; and
an anchor device adapted to connect to an anchor point;
- 5 wherein the flexible member has a flexible member first end and a flexible member second end;
wherein the first attachment device is connected to the flexible member first end;
wherein the tension device is connected to the flexible member second end;
wherein the anchor device is connected to the tension device; and
- 10 wherein the tension device is adapted to generate tension on the restraint belt loose end.
15. The device of Claim 14:
wherein the anchor device includes a second attachment device adapted to gripping a belt.
16. The device of Claim 14:
15 wherein the anchor device includes a hook-type device.
17. The device of Claim 14, further comprising:
a tension-measuring device connected to the tension device;
wherein the tension-measuring device is adapted to measure the tension generated on the first attachment device.
- 20 18. The device of Claim 14, further comprising:
a tension-measuring device;
wherein the tension-measuring device is connected to the tension device, and,
wherein the tension-measuring device is adapted to measure the tension generated on the first attachment device.
- 25 19. The device of Claim 18 wherein the tension-measuring device is directly connected to the tension device.
20. The device of Claim 18 wherein the tension device is selected from the group consisting of a pulley-type device; a gear-type device, and a lever-type device.